the operation. There was then a very large ulcer at the site of the ureteral orifice on the side from which the kidney was removed. This ulcer got well under applications with the nitrate of silver stick. It is my custom now after nephrectomy for tuberculosis to cauterize the whole bladder with nitrate of silver stick, even those parts apparently unaffected by the disease. The burning is not deep, the germs are destroyed, and the relief given is very great. I have done this a number of times, always with good effect. The urinations are always diminished, sloughs are cast off, leaving a clean surface below. If necessary, further cauterization may be done to localized areas.

THE VALUE OF HEMOLYSIS IN THE DIAGNOSIS OF CARCINOMA.

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IN 1901 Ascoli [1] studied the effects of human serum on the red corpuscles of human individuals. He reported a series of one hundred and fourteen cases. Hemolysis was found in two cases of gastric carcinoma and in many cases of tuberculosis and pneumonia. Since then Kelling [2] has tested the hemolytic reaction of human carcinoma with the corpuscles of sheep, cows and chickens. In 365 malignant cases he obtained 119 positive results (43%); of 300 other cases, 11 positive results (3%). From these results he thinks the reaction, when it occurs, to be practically specific for malignant disease. Fischel,[3] on the other hand, using the same technic, concludes that the reaction is not specific for malignant disease, as he obtained it in tuberculosis, pernicious anemia and chronic heart disease. Weil,[4] using the serum of dogs with lymphosarcoma, has a series of 200 cases in which he found that the serum of animals with tumors was almost without exception actively hemolytic to the corpuscles of other dogs. Recently Weil [5] has reported a series of cases in which he used human serum and human corpuscles. This series contains 23 cases of malignant disease, 40 cases other than malignant disease and 6 normal cases. He obtained a positive reaction in 40% of the early malignant tumors, in 56% of the late malignant cases, in 33% of benign tumors, in 26% of the cases other than malignant disease, and did not obtain it in his 6 normal cases. From these results he concludes that the reaction is not pathognomonic of malignant disease. Crile,[6] using Weil's method, with human serum and human corpuscles, reports a series of 80 carcinoma cases in which hemolysis was obtained in 82%. Hemolysis was not obtained in benign tumors nor in a series of 125 normal cases.

My technic is the same as Crile's, with the exception that the blood was taken from an ear instead of a vein, as I found that 2 or 3 ccm. of blood was enough for all purposes. All serum that showed autolysis was discarded for obvious reasons. Crile states that tuberculosis may be differentiated by this autolytic reaction. My results do not agree with this, as autolysis occurred in normal and carcinoma cases.

TABLE I.

	Diagnosis.	Pathological examination.	Remarks.	Patient's serum to normal corpuscles	Normal serum to patient's corpuscles.
1	Cancer of intestine	Carcinoma	Late (inoperable)	0	+
2	Cancer of rectum	Carcinoma	Late (inoperable)	0	0
3	Cancer of stomach	——	No cancer found at operation	0	0
4	Cancer of jaw	Carcinoma	Late (inoperable)	0	0
5	Cancer of stomach	Carcinoma		0	0
6	Cancer of stomach	——	No cancer found at operation	0	0
7	Epithelioma of lip	Epithelioma	Early case	0	+
8	Cancer of tongue	Carcinoma	Recurrent (inoperable)	0	0
9	Cancer of intestine	Carcinoma	Early case	0	+
10	Cancer of cervix	Carcinoma	Late (inoperable)	0	0
11	Cancer of jaw	Carcinoma	Recurrent (inoperable)	0	0
12	Cancer of stomach	Carcinoma	Recurrent (inoperable)	0	+
13	Cancer of jaw	Carcinoma	Early case	0	+
14	Cancer of breast	Carcinoma	Recurrent (inoperable)	0	+
15	Cancer of stomach	Carcinoma	Late (inoperable)	0	0
16	Hydatid cyst of liver	Carcinoma		0	0
17	Cancer of tongue	Carcinoma	Late (inoperable)	0	0
18	Cancer of sigmoid	——	Late (inoperable)	0	+
19	Cancer of rectum	Carcinoma	Late (inoperable)	0	0
20	Gallstones	Carcinoma liver		0	0
21	Tumor of breast	Carcinoma	Early case	0	+
22	Cancer of breast	Carcinoma	Early case	0	0
23	Epithelioma of lip	Epithelioma	Early case	0	0
24	Cancer of esophagus	——		0	0
25	Advanced tuberculosis of lungs			0	+
26	Tuberculous epididymitis			0	0
27	Addison's disease			0	+
28	Tuberculous pleurisy			0	0
29	Tuberculosis of lungs			0	0
30	Tuberculous glands of neck	Tuberculosis		0	+
31	Tuberculous peritonitis			0	+
32	Tuberculous pleurisy			0	0
33	Cardio-renal			0	0
34	Cardio-renal			0	0
35	Cardio-renal			0	0

TABLE I. (Continued.)

	Diagnosis.	Pathological examination.	Remarks.	Patient's serum to normal corpuscles	Normal serum to patient's corpuscles.
36	Cardio-renal			0	0
37	Cardio-renal			0	0
38	Typhoid fever			0	0
39	Cirrhosis of liver		Jaundice	0	0
40	Cirrhosis of liver			0	0
41	Fibroid	Fibroid		0	0
42	Fibroma of breast	Fibroma		0	0
43	Fibroma of breast	Fibroma		0	0
44	Sarcoma of antrum	Sarcoma	Late (inoperable)	+	0
45	Hodgkins disease	Hodgkins		0	+
46	Catarrhal jaundice			0	0
47	Pernicious anemia			0	0
48	Chlorosis			0	0
49	Malaria			0	+
50	Malaria			0	0
51	Lymphatic leukemia			0	0
52	Chronic empyema			0	+
53	Diabetes			0	0
54	Diabetes			0	0
55	General paresis			+	0
56	Tabes			0	0
57	Paraplegia			0	+
58	Gumma of lung			0	0
59	Gout			0	0
60	Syphilis of liver			0	0
61	Lead poisoning			0	0
62	Pleurisy with effusion			0	0
62–101	Normal		In which hemolysis occurred 7 times		

TABLE II.

	Diagnosis.	Hemolysis.	Per cent of hemolysis.	No hemolysis.
22	Carcinoma	8	36	14
8	Tuberculosis	4	50	4
39	Normal	7	17	32
32	Other cases	6	18	26

In this series of 109 cases, 39 normal individuals were tested, in which hemolysis occurred seven times (17%); 22 cases of carcinoma, in which hemolysis occurred eight times (36%). It occurred in 50% of the cases of tuberculosis; also it occurred in Hodgkins disease, chronic empyema, tabes, paraplegia, general paresis, one case of malaria and in one case of sarcoma.

From these results, at the present time, hemolysis is of no value in the diagnosis of carcinoma.

Moreover, in that hemolysis occurs, *in vitro*, in other diseases than carcinoma and in normal individuals, it would seem necessary to do an hemolytic test before transfusion. This is borne out by the occurrence of two deaths following direct transfusion, one reported by Pepper and Nesbit [7] and the other an unpublished case.

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[1] Ascoli: Münch. Med. Wochenschr., 1901, 1239.
[2] Kelling: Berl. klin. Wochenschr., 1907, 1355.
[3] Fischel: *Ibid.*, 1908, 882.
[4] Weil: Jour. Am. Med. Asso., 1908, i, 64.
[5] Weil: Jour. Med. Research, 1908, 281.
[6] Crile: Jour. Am. Med. Asso., 1908, i, 1883.
[7] Pepper and Nesbit: *Ibid.*, 1907, xlix, 385.

A THOROUGH and complete test of pasteurizing machines is being made in the laboratories of the Chicago Department of Health to determine at what temperature each type and make of machine will destroy tubercle bacilli, typhoid bacilli, diphtheria bacilli, staphylococci and streptococci and 99% of all bacteria contained in market milk having 3,000,000 or more bacteria. These tests are made on the machines themselves, running under normal, practical conditions. — *New York Med. Jour.*

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY. SURGICAL SECTION. NOV. 18, 1908.

F. T. MURPHY, M.D., Secretary.

DR. A. T. CABOT, read a paper on

SURGICAL TREATMENT OF CANCER OF THE BLADDER.[1]

DR. A. L. CHUTE, read a paper on

SOME ASPECTS OF CYSTITIS.[2]

DR. F. S. WATSON: Before beginning the remarks which I intended to make, I want to say how very much impressed I was with Dr. Cabot's paper, the one in regard to which I propose to speak, and especially how glad I was to hear him speak so strongly and definitely in regard to the question of malignancy at the beginning of supposed benign growths. There are many other points in his masterly paper on which I would like to speak but for which there is not time.

The treatment of tumors of the bladder is one of the least encouraging in surgery. With the exception of a trifling number of cases which have perhaps been cured by spontaneous expulsion of benign papillomata, all persons having vesical neoplasms who are treated expectantly or palliatively die of the disease; those with benign tumors from repeated hemorrhages, and, in a proportion of the cases, from vesical and renal sepsis superadded, and those having malignant disease dying after the manner in which people die of that condition when it is elsewhere in the body. The results of palliative treatment are then universally fatal.

What are those of surgical intervention? I know of but three or four surgeons in the world — four or five possibly — who have published a series of as many as 50 cases of this kind in which they have personally operated. My own experience is so small as to be limited to 12 and to 8 others in which I have observed the disease. The only bright feature is that one patient has remained well fifteen years, which is one of

[1] See page 65.
[2] See page 68.